

## GNA Series

## 2 – 20GHz Low Noise Amplifier

### Features

- Frequency Range: 2-20GHz
- Gain: 20dB
- P<sub>1dB</sub>: +16dBm
- IP3: +26dBm
- Noise Figure: 2.0dB (typ.)
- DC Power: +5V @ 115mA
- RF Connector: SMA-F

### Photo



### Description

GNA-500F is a high performance Microwave Low Noise Amplifier, with standard frequency range of 2GHz to 20GHz.

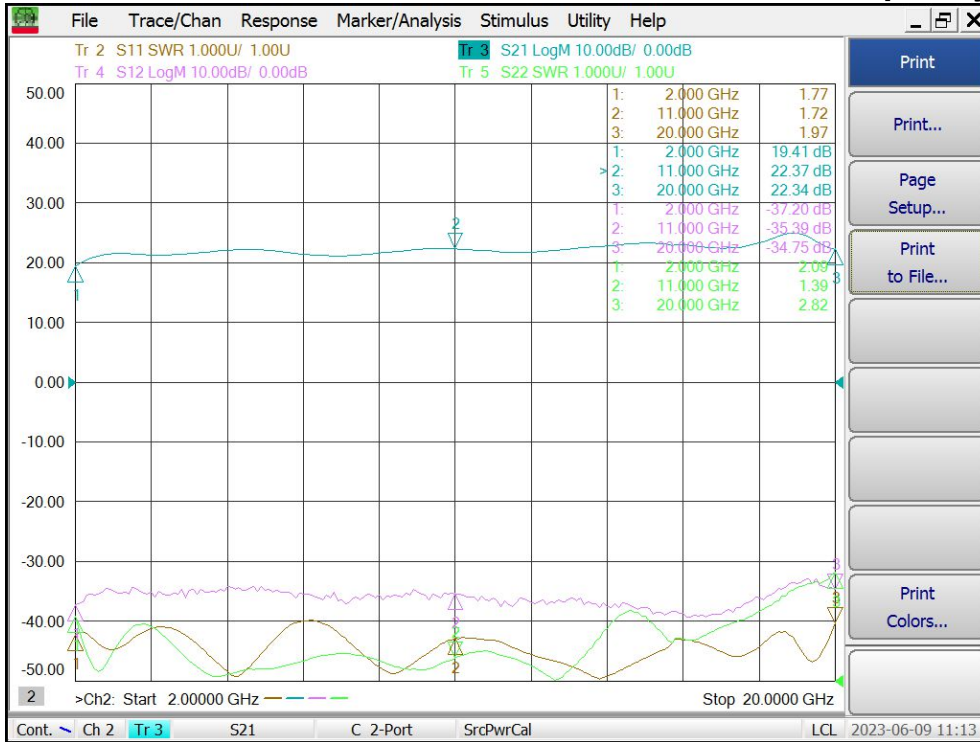
### Electrical Specifications @+25°C, Z<sub>in</sub>=Z<sub>out</sub>=50 Ω, V<sub>supply</sub> = +5VDC

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	GHz	2		20
Gain (S <sub>21</sub> )				
f = 2GHz	dB		19.5	
f = 11GHz	dB	20.0	22.0	
f = 20GHz	dB		22.0	
Gain Flatness	dB		±2.0	±3.0
Output Power P <sub>1dB</sub> @ 11GHz	dBm	+14	+16	
Output Third Order IP3 @ 11GHz	dBm	+24	+26	
Noise Figure @ 11GHz	dB		2.0	2.2
Reverse Isolation (S <sub>12</sub> )	dB	-30	-35	
VSWR-Input (S <sub>11</sub> ) @ 11GHz			1.7:1	2.0:1
VSWR-Output (S <sub>22</sub> ) @ 11GHz			1.4:1	1.7:1
DC Power Supply - Voltage	V	4.5	5	5.5
DC Power Supply - Current	mA		115	140
Operating Temperature	°C	-40		+85
Size (RF/DC feedthru's excluded)	Inch	1.00 (L) x 0.75 (W) x 0.45 (H)		
Weight	Oz	0.6 (17 grams)		

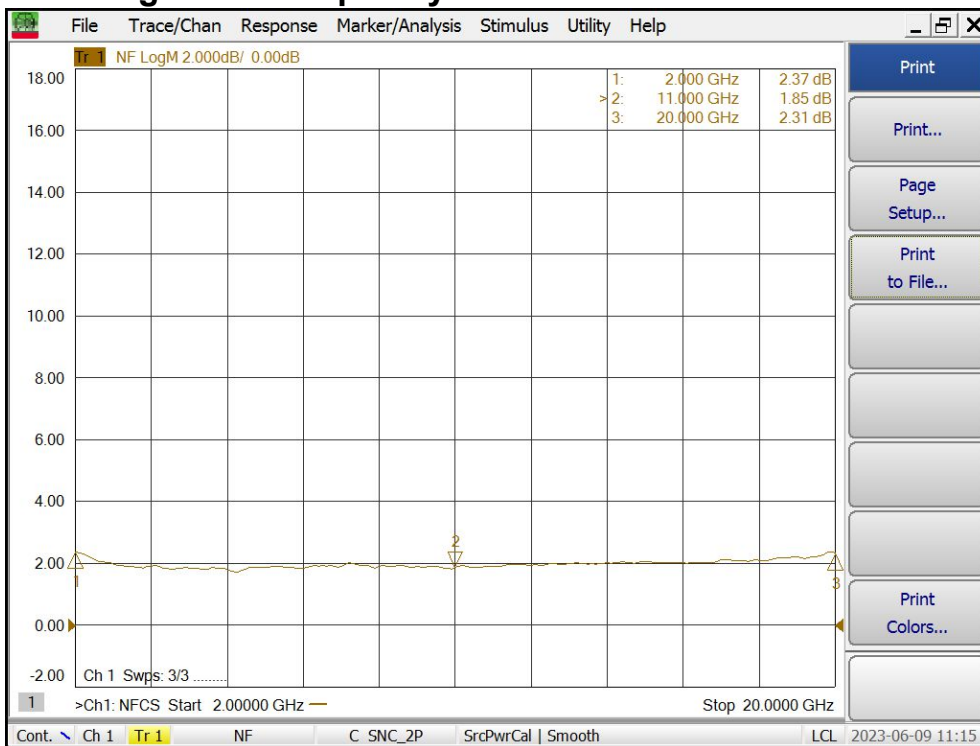
**GNA Series**

**2 – 20GHz Low Noise Amplifier**

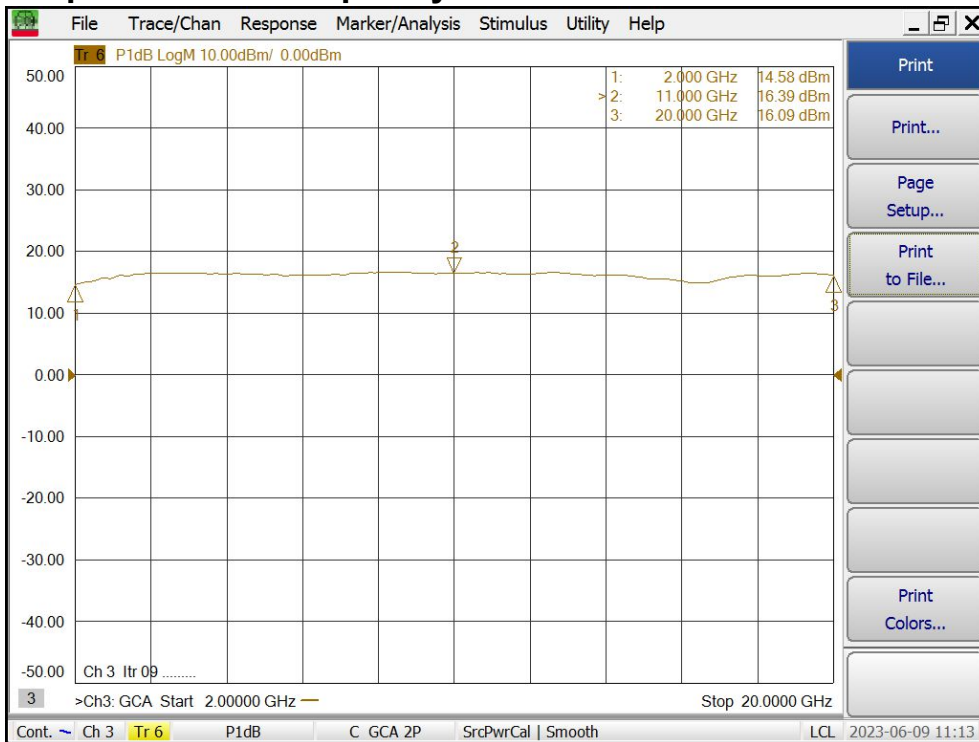
**Gain S21, Isolation S12, Return Loss S11, S22 vs Frequency**



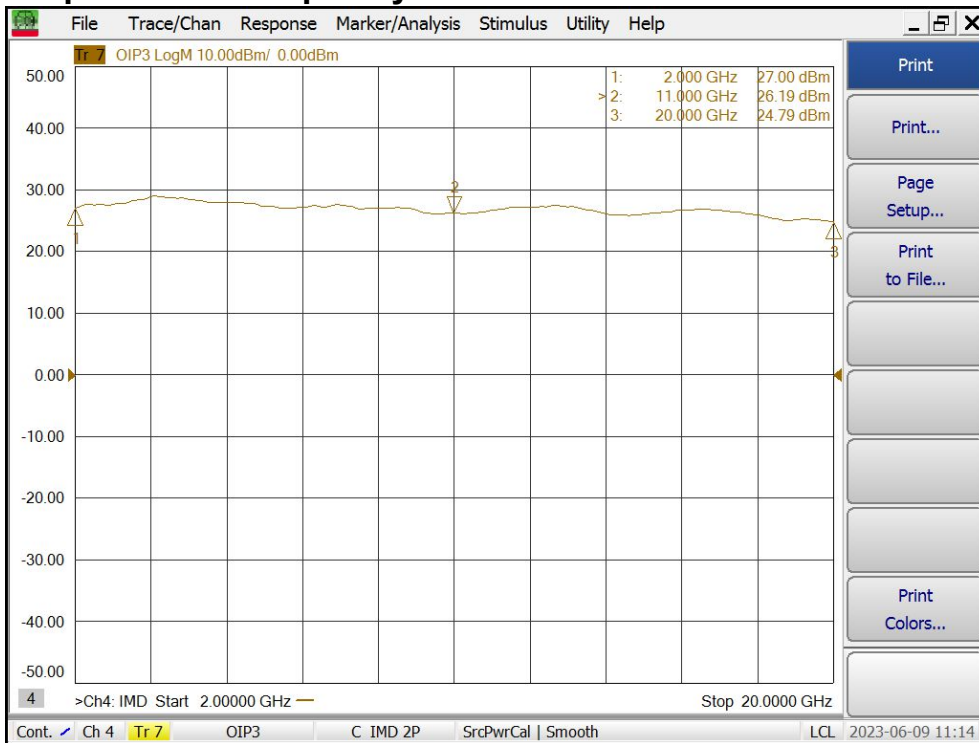
**Noise Figure vs Frequency**



**Output P1dB vs Frequency**



**Output IP3 vs Frequency**



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### Absolute Maximum Ratings

Parameter	Absolute Maximum
Supply Voltage (Survival)	+6V
RF Input Power	+20dBm
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +125 °C

### ESD Sensitive Material



### Outline

